

## REMARKS

Claims 1-22 are pending. Claim 8 is amended herein. No new matter is added as a result of the claim amendments.

### 102 Rejections

Claims 1-6, 8-13, 15-20 and 22 are rejected under 35 U.S.C. § 102(e) as being anticipated by Hadzikadic et al. ("Hadzikadic;" US Publication No. 2002/0059202). Applicants have reviewed the cited reference and respectfully submit that the present invention as recited by Claims 1-6, 8-13, 15-20 and 22 is not shown or suggested by Hadzikadic.

Independent Claim 1 recites that an embodiment of the present invention includes "receiving a record comprising a plurality of variables, wherein said record comprises information for a portion of said variables; using said information with a first classification tool adapted to classify said record; and using said information with a second classification tool instead of with said first classification tool to classify said record in response to determining that said first classification tool requires a particular item of information that is missing from said information" (emphasis added).

Independent Claims 8 and 15 recite limitations similar to the above, while independent Claim 22 recites "using said information with a first classification tree adapted to classify said record, wherein said first classification tree is based on a substantially complete set of information for said plurality of variables; and using said information with a second classification tree instead of with said first classification tree to classify said record when said first classification tree requires a particular item of information that is missing from said information, wherein said second classification tree is based on information for one of said subsets of variables,

wherein said one of said subsets does not include said particular item of information that is missing" (emphasis added).

Thus, independent Claims 1, 8, 15 and 22 describe the use of a classification tool to classify a record. Moreover, independent Claims 1, 8, 15 and 22 each recite: two classification tools; the use of one tool instead of the other; and a criterion for deciding when one of the tools is used instead of the other. Furthermore, independent Claims 1, 8, 15 and 22 address how to classify a record when an item of information is missing from the record. Also, as recited in Claims 2, 9 and 16, "said first classification tool and said second classification tool are a first classification tree and a second classification tree, respectively" (emphasis added). In general, according to an embodiment of the present claimed invention, a record is received, an attempt is made to classify the record using a first classification tree, but if an item of information needed by the first classification tree is missing from the record, then an attempt is made to classify the record using a second classification tree.

In contrast to the present claimed invention, Hadzikadic only describes the development of a classification tool or classification tree. In general, Applicants understand Hadzikadic to describe a process in which "instances" to be classified are received and added to a tree in order to build the tree. Reference is made to paragraph [0077] of Hadzikadic, which refers to a "classification tree building process." Applicants respectfully submit that Hadzikadic does not teach the use of a classification tree to classify a record, as claimed. In other words, Applicants respectfully submit that Hadzikadic takes data and builds a classification tree, while the present claimed invention takes a classification tree and applies it to data.

Also, Applicants respectfully submit that Hadzikadic does not teach the use of one classification tool instead of another, and in particular does not show or suggest a criterion for deciding when one of the classification tools is used instead of the other, as claimed.

Furthermore, in contrast to the present claimed invention, Hadzikadic does not address the situation in which the instance of information to be classified is incomplete. As defined by Hadzikadic, an instance of information contains characteristics or attributes. Hadzikadic does not address how to classify an instance in which one or more of the characteristics or attributes is missing from the instance of information to be classified. Indeed, this very problem is one of the problems solved by the present claimed invention.

Therefore, Applicants respectfully submit that Hadzikadic does not show or suggest the present claimed invention as recited by independent Claims 1, 8, 15 and 22, and that Claims 1, 8, 15 and 22 are in condition for allowance. Claims 2-6 are dependent on Claim 1 and recite additional limitations. Claims 9-13 are dependent on Claim 8 and recite additional limitations. Claims 16-20 are dependent on Claim 15 and recite additional limitations. Accordingly, Applicants respectfully submit that Hadzikadic does not show or suggest the additional claimed features of the invention as recited in Claims 2-6, 9-13 and 16-20, and that these claims are in condition for allowance as being dependent on allowable base claims. Therefore, the Applicants respectfully assert that the basis for rejecting Claims 1-6, 8-13, 15-20 and 22 under 35 U.S.C. § 102(e) is traversed.

Claims 1-6, 8-13, 15-20 and 22 are also rejected under 35 U.S.C. § 102(e) as being anticipated by Iwamoto et al. ("Iwamoto," US Patent No. 6,671,680). Applicants have reviewed the cited reference and respectfully submit that the

present invention as recited by Claims 1-6, 8-13, 15-20 and 22 is not shown or suggested by Iwamoto.

As presented above, independent Claims 1, 8, 15 and 22 describe the use of a classification tool to classify a record. Moreover, independent Claims 1, 8, 15 and 22 each recite: two classification tools; the use of one tool instead of the other; and a criterion for deciding when one of the tools is used instead of the other. Furthermore, independent Claims 1, 8, 15 and 22 address how to classify a record when an item of information is missing from the record. Also, as recited in Claims 2, 9 and 16, "said first classification tool and said second classification tool are a first classification tree and a second classification tree, respectively" (emphasis added). In general, according to an embodiment of the present claimed invention, a record is received, an attempt is made to classify the record using a first classification tree, but if an item of information needed by the first classification tree is missing from the record, then an attempt is made to classify the record using a second classification tree.

In contrast to the present claimed invention, Iwamoto only describes a data mining operation and a way of presenting the results of the data mining in a manner to the user. According to Iwamoto, a user supplies a data mining analysis request that designates conditions that are to be applied to data stored in a data warehouse. Based on the conditions designated by the user, data in the data warehouse is classified and presented to the user. In one example, Iwamoto describes presenting the classification results as a classification tree.

In general, Applicants respectfully submit that Iwamoto shares the same shortcomings as Hadzikadic, discussed above. Applicants understand Iwamoto to describe a tree building process rather than the use of a

classification tree to classify a record, as claimed. In other words, Applicants respectfully submit that Iwamoto takes data and builds a classification tree, while the present claimed invention takes a classification tree and applies it to data.

Furthermore, in contrast to the present claimed invention, Iwamoto does not address the situation in which the instance of information to be classified is incomplete. Iwamoto presumes that the data conforming to the conditions designated in the user's analysis request is present in the data warehouse. Iwamoto does not discuss how incomplete data is treated. However, the problem of classifying incomplete data is one of the problems solved by the present claimed invention. While Iwamoto appears to ignore this problem, the present claimed invention attempts to classify records in which an item is missing.

Also, Applicants respectfully submit that Iwamoto does not show or suggest that missing information is used as a criterion for deciding when one classification tool is used instead of another classification tool, as claimed.

Therefore, Applicants respectfully submit that Iwamoto does not show or suggest the present claimed invention as recited by independent Claims 1, 8, 15 and 22, and that Claims 1, 8, 15 and 22 are in condition for allowance. Claims 2-6 are dependent on Claim 1 and recite additional limitations. Claims 9-13 are dependent on Claim 8 and recite additional limitations. Claims 16-20 are dependent on Claim 15 and recite additional limitations. Accordingly, Applicants respectfully submit that Iwamoto does not show or suggest the additional claimed features of the invention as recited in Claims 2-6, 9-13 and 16-20, and that these claims are in condition for allowance as being dependent on allowable base claims. Therefore, the Applicants respectfully assert that

the basis for rejecting Claims 1-6, 8-13, 15-20 and 22 under 35 U.S.C. § 102(e) is traversed.

### 103 Rejections

Claims 7, 14 and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hadzikadic in view of Chaudhuri et al. ("Chaudhuri;" US Patent No. 6,212,526). The Applicants have reviewed the cited references and submit that Hadzikadic and Chaudhuri, alone or in combination, do not show or suggest the invention as recited in Claim 7, 14 and 21.

Claim 7 is dependent on Claim 1 and recites additional limitations. Claim 14 is dependent on Claim 8 and recites additional limitations. Claim 21 is dependent on Claim 15 and recites additional limitations.

As presented above, Applicants respectfully submit that the present invention as recited in Claims 1, 8 and 15 is not shown or suggested by Hadzikadic.

Applicants further submit that Chaudhuri does not overcome the shortcomings of Hadzikadic. Figures 3A and 3B of Chaudhuri show a decision tree that can be used to classify data. However, Chaudhuri, alone or in combination with Hadzikadic, does not teach the use of one decision tree instead of another, nor the use of missing information as a criterion for deciding when one decision tree is used instead of another, as claimed.

In contrast to the present claimed invention, Chaudhuri, alone or in combination with Hadzikadic, does not address the situation in which data to be classified is incomplete. In effect, Chaudhuri serves as an example of the prior art that is described in the background art section of the instant

application as being problematic. As mentioned above, the problem of classifying a record that is incomplete is one of the problems solved by the present claimed invention.

Therefore, Applicants respectfully submit that Chaudhuri, alone or in combination with Hadzikadic, does not show or suggest "receiving a record comprising a plurality of variables, wherein said record comprises information for a portion of said variables; using said information with a first classification tool adapted to classify said record; and using said information with a second classification tool instead of with said first classification tool to classify said record in response to determining that said first classification tool requires a particular item of information that is missing from said information" as recited in independent Claim 1 and as similarly recited in independent Claims 8 and 15.

In summary, Applicants respectfully submit that Hadzikadic and Chaudhuri, alone or in combination, do not show or suggest the present claimed invention as recited by Claims 1, 8 and 15. As such, Applicants respectfully submit that Hadzikadic and Chaudhuri, alone or in combination, do not show or suggest the additional claimed features of the invention as recited in Claims 7, 14 and 21 dependent on Claims 1, 8 and 15, and that these claims are in condition for allowance as being dependent on allowable base claims. Therefore, the Applicants respectfully assert that the basis for rejecting Claims 7, 14 and 21 under 35 U.S.C. § 103(a) is traversed.

Claims 7, 14 and 21 are also rejected under 35 U.S.C. § 103(a) as being unpatentable over Iwamoto in view of Chaudhuri. The Applicants have reviewed the cited references and submit that Iwamoto and Chaudhuri, alone

or in combination, do not show or suggest the invention as recited in Claim 7, 14 and 21.

As noted above, Claim 7 is dependent on Claim 1 and recites additional limitations.; Claim 14 is dependent on Claim 8 and recites additional limitations; and Claim 21 is dependent on Claim 15 and recites additional limitations.

As presented above, Applicants respectfully submit that the present invention as recited in Claims 1, 8 and 15 is not shown or suggested by Iwamoto.

Applicants further submit that Chaudhuri does not overcome the shortcomings of Iwamoto. Figures 3A and 3B of Chaudhuri show a decision tree that can be used to classify data. However, Chaudhuri, alone or in combination with Hadzikadic, does not teach the use of one decision tree instead of another, nor the use of missing information as a criterion for deciding when one decision tree is used instead of another, as claimed.

In contrast to the present claimed invention, Chaudhuri, alone or in combination with Iwamoto, does not address the situation in which data to be classified is incomplete. In effect, Chaudhuri serves as an example of the prior art that is described in the background art section of the instant application as being problematic. As mentioned above, the problem of classifying a record that is incomplete is one of the problems solved by the present claimed invention.

Therefore, Applicants respectfully submit that Chaudhuri, alone or in combination with Iwamoto, does not show or suggest "receiving a record



comprising a plurality of variables, wherein said record comprises information for a portion of said variables; using said information with a first classification tool adapted to classify said record; and using said information with a second classification tool instead of with said first classification tool to classify said record in response to determining that said first classification tool requires a particular item of information that is missing from said information" as recited in independent Claim 1 and as similarly recited in independent Claims 8 and 15.

In summary, Applicants respectfully submit that Iwamoto and Chaudhuri, alone or in combination, do not show or suggest the present claimed invention as recited by Claims 1, 8 and 15. As such, Applicants respectfully submit that Iwamoto and Chaudhuri, alone or in combination, do not show or suggest the additional claimed features of the invention as recited in Claims 7, 14 and 21, and that these claims are in condition for allowance as being dependent on allowable base claims. Therefore, the Applicants respectfully assert that the basis for rejecting Claims 7, 14 and 21 under 35 U.S.C. § 103(a) is traversed.

#### Conclusions

In light of the above remarks, reconsideration of the rejected claims is respectfully requested.

Based on the arguments presented above, it is respectfully asserted that Claims 1-22 overcome the rejections of record and, therefore, allowance of these claims is solicited.

The Applicants have reviewed the references cited but not relied upon. The Applicants did not find these references to show or suggest the present


claimed invention: US Patent No. 5,870,735; US Patent No. 6,278,464; and US Patent No. 6,563,952.

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

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Dated: 3/28/04

  
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